EXTENSA 700/710 Notebook

Service Guide

CSD Web: csd.acer.com.tw

Service Guide files and updates are available on Acer Intranet and CSD database on Lotus Notes.

More detail information, please refer to Service CD kit.

EX700/710 Service CD Kit
PART No. 6M.48469.001

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Disclaimer

System Specifications

Overview

This computer was designed with the user in mind. Here are just a few of its many features:

Performance

- Intel Pentium® II processor or Intel Pentium® processor with MMX™ technology
- 64-bit main memory and external (L2) cache memory
- Large LCD display and PCI local bus video with 128-bit graphics acceleration
- Internal removable CD-ROM drive (media bay)
- Internal 3.5-inch floppy drive
- High-capacity, Enhanced-IDE removable hard disk
- Lithium-Ion battery pack
- Heuristic power management system with standby and hibernation power saving modes

Multimedia

- PCI-based 16-bit high-fidelity stereo audio with 3-D sound and wavetable synthesizer
- Built-in dual speakers
- S-video output
- Ultra-slim, high-speed CD-ROM drive

Connectivity

- High-speed fax/data modem port
- Fast infrared wireless communication
- USB (Universal Serial Bus) port

Human-centric Design and Ergonomics

- Lightweight and slim

- Sleek, smooth and stylish design

- Full-sized keyboard

- Wide and curved palm rest

- Ergonomically-centered touchpad pointing device

Expansion

- CardBus PC card (formerly PCMCIA) slots (two type II/I or one type III) with ZV (Zoomed Video) port support

- Mini docking station option for one-step connect/disconnect from peripherals

- Upgradeable memory and hard disk

System Status Indicators

The Power and Standby indicators are visible even when you close the display cover so you can see the status of the computer while the cover is closed.

Icon	Function	Description
☼	Power	Lights when the computer is on.
✋	Standby	Lights when the computer enters Standby mode.
◆	Media Activity	Lights when the floppy drive, hard disk or CD-ROM drive (or other media bay module) is active.
🔋	Battery Charge	Lights when the battery is being charged.
🄰	Caps Lock	Lights when Caps Lock is activated
🄱	Num Lock	Lights when Numeric Lock is activated

Hot Keys
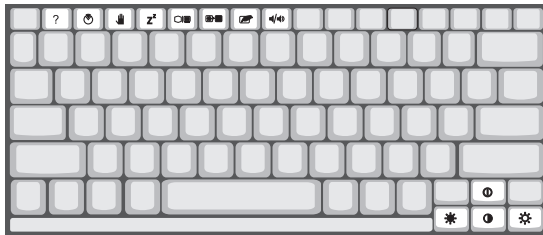
The computer employs hot keys or key combinations to access most of the computer's controls like screen contrast and brightness, volume output and the BIOS setup utility

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Hot Key	Icon	Function	Description
Fn-F1	?	Hot key help	Displays a list of the hotkeys and their functions.

Hot Key	Icon	Function	Description
Fn-F2		Setup	Accesses the notebook configuration utility.
Fn-F3		Standby	Puts the computer in Standby mode. Press any key to return.
Fn-F4	z^z	Hibernation	Puts the computer in Hibernation mode (if PHDISK, the hibernation utility, is installed, valid and enabled). Press the power switch to resume. Otherwise, the computer enters Standby mode.
Fn-F5		Display toggle	Switches display output between the display screen, external monitor (if connected) and both the display screen and external monitor.
Fn-F6		Screen blank	Turns the display screen backlight off to save power. Press any key to return.
Fn-F7		Touchpad on/ off	Turns the internal touchpad on and off.
Fn-F8		Speaker on/ off	Turns the speakers on and off; mutes the sound.
Fn-↑		Contrast up	Increases the screen contrast (available only for models with SCC displays).
Fn-↓		Contrast down	Decreases the screen contrast (available only for models with SCC displays).
Fn-→		Brightness up	Increases the screen brightness.
Fn-←		Brightness down	Decreases the screen brightness.

Hot Key	Icon	Function	Description
Fn-H		Turbo mode on/off	Toggles turbo mode on and off. With turbo mode off, power management is maximized.

Note: If you want to use an external PS/2 mouse, first enable the touchpad, connect the external PS/2 mouse, then disable the touchpad if necessary.

Activating Hot Keys

When activating hot keys, press and hold the first key **Fn** before pressing the other key in the hot key combination.

Hardware Configuration and Specification

Memory Address Map

Address Range	Definition	Function
000000-09FFFF	640 KB memory	Base memory
0A0000-0BFFFF	128 KB video RAM	Reserved
0C0000-0CBFFF	Video BIOS	Video BIOS
0F0000-0FFFFF	64 KB system BIOS	System BIOS
100000-top limited	Extended memory	SIMM memory
FE0000-FFFFFF	256 KB system ROM	Duplicate of code assignment at 0E0000-0FFFFF

Interrupt channel default assignment

Channel	Default setting	mode	Remarks
NMI	System errors		
IRQ0	System timer	Edge	
IRQ1	Keyboard	Edge	
IRQ2	(cascade)	Edge	
IRQ3	Modem/COM1 (can be disable)	Edge	Dynamically programmable
IRQ4	Infrared	Edge	Dynamically programmable
IRQ5	SoundBlaster Audio (PCI device)	level	PCI interrupt sharing
IRQ6	Floppy	Edge	
IRQ7	Printer	Edge	Dynamically programmable
IRQ8	Real time clock	Edge	
IRQ9	(SCI for ACPI OS) PCI device	level	PCI interrupt sharing
IRQ10	Modem	Edge	Dynamically programmable
IRQ11	PCI device	level	PCI interrupt sharing
IRQ12	pointing device	Edge	
IRQ13	Math coprocessor	Edge	
IRQ14	Hard disk driver		

Interrupt channel default assignment

Channel	Default setting	mode	Remarks
IRQ15	CD-ROM driver		

DMA channel default assignment

Channel	Default setting	mode
DRQ/DACK0		8-bit
DRQ/DACK1	ECP	8-bit
DRQ/DACK2	Floppy	8-bit
DRQ/DACK3	Fast Infrared	8-bit
DRQ/DACK5	not use	16-bit
DRQ/DACK6	not use	16-bit
DRQ/DACk7	not use	16-bit

I/O address map

Address	Drvice
000-00F	DMA controller-1
020-021	Interrupt controller-1
040-043	Timer 1
048-04B	Timer2
060-06E	Keyboard controller 8742 chip select
070-071	Real-time clock and NMI mask
080-08F	DMA page register
0A0-0A1	Interrupt controller-2
0C0-0DF	DMA controller-2
1F0-1F7	Hard disk select
220-22F	Audio (option)
230-23F	Audio (option)
240-24F	Audio (option)
250-25F	Audio (option)
278-27F	Parallel port 3
2E8-2EF	COM4
2F8-2FF	COM2
378, 37A	Parallel port 2
3BC-3BE	paraller port 1
3B4, 3B5, 3BA	Video subsystem
3C0-3C5	Video subsystem

I/O address map

Address	Drvice
3C6-3C9	Video DAC
3C0-3CF	Enhanced graphics adapter
3E0-3E1	PCMCIA controller
3E8-3EF	COM3
3F0-3F7	Floppy disk controller
3F8-3FF	COM1
CF8-Cff	PCI configuration register

Processor

item	Specification
CPU type	Intel Tillamook 166/200/233/266 Mhz or Deschutes 233/266 Tillamook--Intel Pentium architecture, 64 bit data bus, 16K-Byte code cache, 16 K-Bytes write back data, cache, MMX Deschutes--Intel Pentium II architecture, 16KB instruction cache and 16 KB data cache, MMX, Quick Start for low power.
CPU package	IMM module, 512KB L2 cache
CPU core voltage	1.8V
CPU I/O voltage	2.5V

BIOS

Item	Specification
BIOS vendor	Phoenix
BIOS Version	V1.0 R00M2F
BIOS ROM type	ROM
BIOS ROM size	256KB
BIOS package	32 PIn PLCC
Support protocol	PCI 2.1, APM 1.2, DMI 2.00.1, E-IDE, ACPI 1.0, ESCD 1.03, ANSI ATA 3.0, PnP 1.1a, Bootable CD-ROM 1.0, ATAPI
BIOS password control	RTC battery

System Memory

Item	Specification
Memory controller	MTXC

System Memory

Item	Specification
Onboard memory size	0MB
DIMM socket number	2 sockets (2 banks)
Supported memory size per DIMM	16/32/64
Supported maximum memory size	128MB (64MB x 2)
Supported DIMM type	Synchronous DRAM
Supported DIMM Speed	SDRAM: With SPD, no parity
Supported DIMM voltage	3.3V
Supported DIMM package	144-pin DIMM

DIMM Memory Combinations

Slot 1	Slot 2	Total Memory
0	0	0
0	16MB	16MB
0	32MB	32MB
0	64MB	64MB
16MB	16MB	32MB
16MB	32MB	48MB
16MB	64MB	80MB
16MB	128MB	144MB
32MB	32MB	64MB
32MB	64MB	96MB
32MB	128MB	160MB
64MB	64MB	128MB

Second-Level Cache

Item	Specification
Cache controller	MTXC
Tag RAm location	IMM
Tag RAM size	32K*8x1
Tag RAM voltage	3.3V
SRAM type	PBSRAM
SRAM size	256K/512K
SRAM location	IMM
SRAM configuration	32K*64 or 64K*32
SRAM speed	Cycle time = 7ns

Second-Level Cache

Item	Specification
SRAM voltage	3.3V
1st level cache control	always enable
2st level cache control	always enable
Cache scheme control	Fixed in Write-back

Video memory

Item	Specification
Fixed or upgradeable	Fixed, built-in NM2160B video controller
Memory size =/configuration	2MB

Video

item	Specification
Chip vendor	NeoMagic
Chip name	NM2160B
Chip voltage	3.3 Volts
ZV port support (Y/N)	Yes
Graph interface (ISA/VESA/PCI)	PCI bus
Max. resolution (LCD)	1024x768 (64K colors) True Color
Max. resolution (Ext. CRT)	1024x768 (64K colors) True Color

External CRT Resolutions Modes

Resolution	CRT Refresh Rate		Simultaneous on TFT LCD
	CRT only	Simultaneous	SVGA
640x480x256	60,75,85	60	Y
640x480x64K	60,75,85	60	Y
640x480x16M	60,75,85	60	Y
800x600x256	60,75,85	60	Y
800X600X64K	60,75,85	60	Y
800x600x16M	60,75,85	60	Y
1024x768x256	60	60	Y
1024x768x16M	60,75,85	60	Y

Parallel Port

Item	Specification
Parallel port controller	NS PC97338
Number of parallel ports	1
Location	Rear side
Connector type	25-pin D-type
Parallel port function control	Enable/Diable by BIOS Setup
ECP support	Yes (set by BIOS setup)
Selectable ECP DMA channel (in BIOS Setup)	DMA channel 1 DMA Channel 3
Selectable parallel port I/O address (via BIOS Setup)	3E8h, 2E8, 378h, 278h, Disabled
Selectable parallel port IRQ (via BIOS Setup)	IRQ5, IRQ7

Serial Port

Item	Specification
Serial port controller	NS PC97338
Number of serial ports	1
16550 UART support	Yes
Connector type	9-pin D-type
Location	Rear side
Serial port function control	Enable/disable by BIOS Setup
Selectable serial port (via BIOS Setup)	3F8h, 2F8h, 3E8h, 2E8h, Disabled
Selectable serial port IRQ (via BIOS Setup)	IRQ3, IRQ4, IRQ10, IRQ11

FIR

Item	Specification
Vendor & model name	IBM31T1100
Input power supply voltage	5V
Transfer data rate	4 Mbps/s
Transfer distance	SIR mode--Min 2.0, Typ 2.6 1.2 Mbps--Min 1.4, Typ 2.0 4 Mbps--Min 1.1, Typ 1.5
Compatible standard	IrDA (Infrared Data Association) 1.1, HP-SIR and Sharp ASK
Output Radiant Intensity Half Angle	+-15
Number of Irda ports	1

FIR

Item	Specification
16550 UART support	Yes
FIR location	Left side
Selectable serial port (by BIOS Setup)	2F8h, IRQ3, Disabled

Audio

Item	Specification
Audio Controller	ESS PCI Maestro II
Audio onboard or optional	Built-in
Mono or Stereo	Stereo
Resolution	16-bit
Compatibility	SB-16, Windows Sound System
Mixed sound source	Voice, Synthesizer, Line-in, Microphone, CD
Voice channel	8-/16-bit, mono/stereo
Voice control location	Right side
Sampling rate	44.1 KHz
Internal microphone	Yes, on the left-higher corner of LCD panel
Internal speaker / Quantity	Yes / 2 pieces, on both hinge sides
MPU-401 UART support	Yes

PCMCIA

Item	Specification
PCMCIA controller	TI PCI1250A
PCMCIA voltage controller	TI TP2206
Supported card type	Type-II / Type-III
Number of slots	Two Type-II or one type-III
Access location	Right side
ZV (Zoomed Video) port support	Yes*2
32 bit CardBus support	Yes

Fax/Modem

Item	Specification
Chipset	Lucent
Fax modem data baud rate (bps)	56K
Data modem data baud rate (bps)	56K

Fax/Modem

Item	Specification
Support modem protocol	V.34 data modem, V.17 fax modem, voice/audio mode, and digital simultaneous voice and data (DSVD) operation over a dial-up telephone line
Modem connector type	RJ11
Modem connector location	Back side

Keyboard

Item	Specification
Keyboard controller	M38867
Keyboard vendor & model name	API
Total number of keypads	84-/85-/88-key
Windows 95 keys	Yes
Internal & external keyboard work simultaneously	Yes

FDD

Item	Specification		
Vendor & model name	D353F3(MISUMI)		
Floppy Disk Specifications			
Media recognition	2DD (720K)	2HD (1.2M, 3mode)	2HD (1.44M)
Sectors / track	9	15	18
Tracks	80	80	80
Data transfer rate (Kbit/s)	250 300	500	500
Rotational speed (RPM)	300 360	360	300
Read/write heads	2		
Encoding method	MFM		
Power Requirement			
Input Voltage (V)	+5 +-10%		

HDD

Item	Specification		
Vendor & Model Name	Hitachi DK226A-21u	IBM DTCA-23240	IBM DTCA-24090

HDD

Item	Specification		
Drive Format			
Capacity (MB)	2160	3240	4090
Bytes per sector	512	512	512
Logical heads	16	16	16
Logical sectors	63	63	63
Drive Format			
Logical cylinders	6225	3154	7944
Physical read/write heads	4	5	6
Disks	2	3	3
Spindle speed (RPM)	4000	4000	4000
Performance Specifications			
Buffer size (KB)	128	512	512
Interface	IDE	IDE	IDE
Data transfer rete (disk-buffer, Mbytes/s)	6.0~9.1	6.4~10.4	6.46~10.4
Data transfer, rate (host~buffer, Mbytes/s)	16.6/33.3	16.6/33.3	16.6/33.3
DC Power Requirements			
Voltage tolerance	5+-5%	5+-5%	5+-5%

CD-ROM

Item	Specification
Vendor & Model Name	KMEUJDA150L 24X
Performance Specification	
Speed (KB/sec)	2100 (ave.speed), 3600 (max)
Access time (ms)	150 (Typ.)
Buffer memory (KB)	128
Interface	Enhanced IDE compatible
Applicable disc format	CD-DA, CD-ROM, CD-ROM XA (except ADPCM), CD-I, Photo CD (Multisession), Video CD, CD+
Loading mechanism	Soft eject (with emergency eject hole)
Power Requirement	
Input Voltage (V)	5

Battery

Item	Specification
Vendor & model name	Sony BTP-1431
Battery Type	Li-ion
Pack capacity (mAH)	3000
Cell voltage (V)	3.6
Number of battery call	8
Package configuration	2P-4S
Package voltage (V)	14.4V

Charger

Item	Specification
Vendor & model name	T62.085.C.00
Input voltage (from adapter, V)	7V-24V
OUtput current (to DC/DC converter, A)	3.5
Battery Low Voltage	Li-ion
Battery Low 1 level (V)	11.41V
Battery Lower 2 level (V)	10.94V
Battery Low 3 level (V)	9.9V
Charge Current	
Backgound charge (charge even system is still operative)	Constant power 30W
Normal charge (charge while system is not operative)	Constant power 45W
Charging Protection	
Maximum temperature protection	60

DC-DC Converter

Item	Specification				
Vendor & model name	Ambit T62.085.C.00				
Input voltage (Vdc)	8~21				
Output rating	5V	3.3V	+12V	6V	3.3VSB
Current (w/load, A)	0~5.8	0~3.3	0~0.12	0~0.1	0.01
Voltage ripple (max., mV)	50	50	100	300	75
Voltage noise (max., mV)	100	100	200	500	200

DC-DC Converter

Item	Specification				
OVP (Over Voltage Protection, V)	5.52~5.55	3.642~3.693	15~17	7~9	-
OCP (Over Current Protection, A)	4~6	4~6	0.3~0.4	-	-

DC-AC inverter is used to generate very high AC voltage, then support to LCD CCFT backlight user, and is also responsible for the control of LCD brightness. Avoid touching the DC-AC inverter area while the system unit is turned on.

DC-AC Inverter

Item	Specification		
Vendor & model name	Ambit T622.087.C.00		
Input voltage (V)	7.3 (min)	-	22 (max)
Input current (mA)	-	-	700 (max)
Output voltage (Vrms, no load)	1300 (min)	155	1600 (max)
Output voltage frequency (kHz)	40 (min)	-	65 (max)
Output current (mArms) (T62.087.C.00)	0.7~5.9 (min)	1.0~6.5 (typ)	1.3~7.1 (max)
Output current (mArms) (T62.086.C.00)	0.6~5.4 (min)	1.0~6.0 (typ)	1.4~6.6 (max)

LCD

Item	Specification		
Vendor & model name	Hitachi SX31S002	IBM ITSV50D2	Hitachi TX34D62
Mechanical Specifications			
LCD display area (diagonal, inch)	12.1	12.1	13.3
Display technology	STN	TFT	TFT
Resolution	SVGA (800x600)	SVGA (800x600)	XGA (1024x768)
Support colors	-	262,144 colors	

LCD

Item	Specification		
Optical Specification			
Contrast ration	50 (typ)	100 (typ)	100 (typ)
Brightness (cd/m2)	70 (typ)	70 (typ)	100 (typ)
Brightness control	keyboard hotkey	keyboard hotkey	keyboard hotkey
Contrast control	keyboard hotkey	None	None
Electrical Specification			
Supply voltage for LCD display (V)	3.3 (typ)	3.0~3.6 (typ)	3.3 (typ)
Supply voltage for LCD backlight (Vrms)	600 (typ)	650 (typ), 660 (max)	650 (typ)

AC Adapter

Item	Specification
Vendor & model name	Delta ADP-60HB.Rev.A
Input Requirements	
nominal voltages (Vrms)	90~270
Frequency variation range (Hz)	47~63
Maximum input current (A, @90Vac, full load)	1.5A
Inrush current	The maximum inrush current will be less than 50A and 100A when the adapter is connected to 115Vac (60Hz) and 230Vac(50Hz) respectively.
Efficiency	It should provide an efficiency of 83% minimum, when measured at maximum load under 115V (60Hz) & 230Vac (60Hz)
Output Ratings (CV mode)	
DC output voltage (V)	+19.0V~20.5V
Noise + Ripple (mV)	300mvp-pmax (20Mhz bandwidth)
Output Ratings (CC mode)	
Load (A)	0 (min) 3.16 (max)
Dynamic output Characteristics	
Turn-on delay time (s, @115Vac)	2

AC Adapter

Item	Specification
Hold up time (ms; @115 Vac input, full load)	8 (min)
Over voltage protection (OVP, V)	26
Short circuit protection	Output can be shorted without damage
Electrostatic discharge (ESD, kV)	+-15 (at air discharge)
Dielectric withstand voltage	
Primary to secondary	3000 Vac (or 4242 Vdc), 10mA for 1 second
Leakage current	0.25 mA maximum @ 254 Vac, 60Hz
Regulatory Requirements	
Internal filter meets: FCC class B requirements. (USA) VDE 243/1991 class B requirements. (German) CISPR 22 Class B requirements. (Scandinavia) VCCI class II requirements. (Japan)	

System Utility

BIOS

The flash Memory Update: The flash memory update is required for the following conditions:

- New versions of system programs
- New features or options

Create a bootable diskette

C:\Sys A:

Copy flash utility & new versions BIOS to the diskette, then boot from diskette driver.

A:\plash 700-40.rom /mode=3

Note: mode=3, set DMI value to system.

To activate the Setup Utility, press F2 during POST (while the Extensa logo is being displayed.

Main

BIOS Setup Utility				
Main	Advanced	Security	Power Saving	Exit
System Time:			[15:10:15]	<Tab>, <Shift-
System Data;			[04/13/1998]	Tab>, or <Enter> selects field.
Floppy Disk A:			[1.44 Mb 3$_{1/2}$"]	
Hard Disk 0			[3253MB]	
CD-ROM/ATAPI Device			[CD-ROM]	
Boot Device Priority				
Speaker:			[Enabled]	
Boot Display Device:			[Auto]	
Mic-In/Lin-in:			[Line-In]	
System memory:			32 MB	
Video Memory:			2 MB	
CPU Type			Pentium II	
CPU Speed			266 MHz	
VGA BIOS Version:			V1.12.000.R01J	
BIOS Version:			V1.0 R00M2F	
F1 Help	Select Item	Change Values		F9 Setup Defaults
Esc Exit	Select Menu	Enter Select Sub-Menu		F10 Save and Exit

Floppy Disk A:

Selects the floppy disk drive type. Options: 1.44 MB, 3½" or Disabled.

Boot Device Priority:

Press Enter to access the Boot Device Priority submenu.

Speaker:

Enables or disables the internal speakers on boot-up. You can override this by toggling Fn-F8 during computer operation. Options: Enabled or Disabled

Boot Display Device:

Sets the display on boot-up. When set to Auto, the computer automatically determines the display device. If an external display device (e.g., monitor) is connected, it becomes the boot display; otherwise, the computer LCD is the boot display. When set to Both, the computer outputs to both the computer

LCD and an external display device if one is connected. Options: Auto or Both

Mic-In/Line-In:

Sets the function of the microphon-in/line-in jack. Options: Mic-in or Line-in

Hard Disk 0 Submenu

BIOS Setup Utility			
Main			
Hard Disk 0	[3253MB]		Item Specific Help
Type:		[Auto]	
Cylinders:		[6304]	
Heads:		[16]	
Sectors/Track:		[63]	
Maximum Capacity		3253MB	
F1 Help	Select Item	Change Values	F9 Setup Defaults
Esc Exit	Select Menu	Enter Select Sub-Menu	F10 Save and Exit

Type:

Sets the hard disk type. Options: Auto, User or NoneMulti-Sector Transfers:

Advanced

BIOS Setup Utility				
Main	Advanced	Security	Power Saving	Exit

Setup Warning

Setting items on this menu to incorrect values may cause your system to malfunction.

Serial Port:	[Enabled]
Base I/O address:	[3F8]
Interrupt:	[IRQ 4]
Parallel Port:	[Enabled]
Mode:	[ECP]
Base I/O address:	[378]
Interrupt:	[IRQ 7]

F1 Help	Select Item	Change Values	F9 Setup Defaults
Esc Exit	Select Menu	Enter Select Sub-Menu	F10 Save and Exit

Serial Port:

Enables or disabled the serial port. Options: Enabled or DisabledBase I/O address:

Base I/O address

Sets the I/O address of the serial port. Options: 3F8, 2F8, 3E8 or 2E8

Interrupt:

Sets the interrupt request of the serial port. Options: IRQ4, IRQ10, IRQ11 or IRQ 3

Parallel Port:
Mode:

Sets the operation mode of the parallel port. Options: ECP, Bi-directional or Output only

Security

BIOS Setup Utility				
Main	Advanced	Security	Power Saving	Exit
User Password Is:			Disabled	
Supervisor Password Is:			Disabled	
Set User Password			[Enter]	
Set Supervisor Password			[Enter]	
Password on boot:			[Enabled]	
Password check during resume:			[Disabled]	
F1 Help	Select Item	Change Values		F9 Setup Defaults
Esc Exit	Select Menu	Enter Select Sub-Menu		F10 Save and Exit

User Password is

When set, this password protects the computer and this Setup Utility from unauthorized entry. When Password on boot and/or Password check during Resume is enabled, you need to enter this password to continue operation. Before setting the user password, you need to set the Supervisor Password. Options: Disabled or Enabled

Set Supervisor Password

When set, this password protects the computer and this Setup Utility from unauthorized entry. It also protects certain parameters in the Setup Utility. When Password on boot and/or Password check during Resume is enabled, you need to enter this password to continue operation. Options: Disabled or Enabled Password on boot: Enables password entry on boot

Password on boot

When enabled, the computer prompts you for a password when the computer boots up. Options: Enabled or Disabled

Password check during resume:

When enabled, the computer prompts you for a password when the computer resumes from standby or hibernation mode. Options: Disabled or Enabled

Power Saving

BIOS Setup Utility				
Main	Advanced	Security	Power Saving	Exit
Heuristic Power Management			[Enabled]	
Display Always On			[Disabled]	
Battery Low Suspend:			[Enabled]	
Resume On Alarm:			[Disabled]	
Resume Time:			[00:00:00]	
Date:			[00/00/0000]	
Wake On LAN:			[Disabled]	
Battery Low Warning Beep:			[Enabled]	
F1 Help	Select Item	Change Values		F9 Setup Defaults
Esc Exit	Select Menu	Enter Select Sub-Menu		F10 Save and Exit

Heuristic Power Management

Enables or disables heuristic power management. See "Power Management Modes" on page 40 for more information on power management modes
Options: Enabled or Disabled

Display Always On

When enabled, the computer display is always on. You may want to set this if you are making a presentation on your computer. Options: Disabled or Enabled

Battery Low Suspend:

Enables or disables the hibernation function during a battery-low condition. When the computer is running very low on battery power, the computer will enter hibernation mode if PhDISK is installed and the hibernation file is valid. Options: Enabled or Disabled

Resume On Alarm:

When enabled and the system resume date and time are valid, the computer resumes (wakes up) at the set time and date. Options: Disabled or Enabled

Resume Time

Sets the time the computer resumes at if Resume on Alarm is enabled.

Format: HH:MM:SS (hour:minute:second)

Wake On LAN:

When enabled, the computer wakes up from standby mode if the computer is accessed through the network. Consult your network administrator for details. Options: Disabled or Enabled

Battery Low Warning Beep:

Enables or disables warning beeps during a battery-low condition. Options: Enabled or Disabled

Exit

BIOS Setup Utility				
Main	Advanced	Security	Power Saving	Exit
Save Change & Exit				
Discard Changes & Exit				
Get Default Values				
Load Previous value				
Save Changes				
F1 Help	Select Item	Change Values		F9 Setup Defaults
Esc Exit	Select Menu	Enter Select Sub-Menu		F10 Save and Exit

Save Change & Exit

Saves any changes made, exits the Setup utility and reboots.

Discard Changes & Exit

Discards any changes made, exits the Setup utility and reboots.

Get Default Values

Resets all parameters to their factory-default values.

Load Previous value

Disregards any changes made in the current session and reloads their previous values.

Save Changes

Saves any changes made.

Heuristic Power Management

This computer has a built-in heuristic power management unit that monitors system activity. System activity refers to any activity involving one or more of the following devices: keyboard, mouse, floppy drive, hard disk, peripherals connected to the serial and parallel ports, and video memory. If no activity is detected for a period of time (called an inactivity time-out), the computer stops some or all of these devices in order to conserve energy.

This computer employs an innovative power management technique called Heuristic Power Management or HPM. HPM allows the computer to provide maximum power conservation and maximum performance at the same time.

Power management methods used by most computers are timer-based. You set inactivity time-out values for the display, hard disk, and other devices. The computer then "sleeps" when these time-outs elapse. The problem with this is that no two users are alike. Each of us has his or her own habits when using the computer, which makes timer-based power management ineffective.

With HPM, your computer manages its power according to the way you use your computer. This means the computer delivers maximum power when you need it, and saves power when you don't need the maximum — all without your intervention. There are no timers to set, because the HPM system figures out everything for you.

We recommend you enable heuristic power management to prolong your battery life.

Power Management Modes

Display Standby Mode

Screen activity is determined by the keyboard, the built-in touchpad, and an external PS/2 pointing device. If these devices are idle for the period

determined by the computer's HPM unit, the display shuts off until you press a key or move the touchpad or external mouse.

"Automatic Dim" Feature

The computer has a unique "automatic dim" power-saving feature. When the computer is using AC power and you disconnect the AC adapter from the computer, it automatically dims the LCD backlight to save power. If you reconnect AC power to the computer, it automatically adjusts the LCD backlight user setting to a brighter level.

Hard Disk Standby Mode

The hard disk enters standby mode when there are no disk read/write operations within the period of time determined by the HPM unit. In this state, the power supplied to the hard disk is reduced to a minimum. The hard disk returns to normal once the computer accesses it.

Peripheral Standby Modes

The peripheral connections in your computer also power down to save power if there is no activity within the period of time specified by the computer's HPM unit for these devices. These include audio, serial ports, floppy drive and parallel port.

Standby Mode

The computer consumes very low power in Standby mode. Data remain intact in the system memory until the battery is drained.

There is one necessary condition for the computer to enter Standby mode:

- Heuristic Power Management must be set to [ENABLED].

There are four ways to enter Standby mode:

- Pressing the Standby hot key **Fn-F3**
- If the waiting time determined by the computer's HPM unit elapses without any system activity
- Closing the display cover
- When the computer is about to enter Hibernation mode (e.g., during a battery low condition), but the Hibernation file is invalid or not present

Note: If the computer beeps but does not enter Standby mode after pressing the Standby hot key, it means the operating system will not allow the computer to enter the power-saving mode.

The following signals indicate that the computer is in Standby mode:

- The buzzer beeps

- The Standby indicator lights

Note: Unstored data is lost when you turn off the computer power in Standby mode or when the battery is drained.

To leave Standby mode and return to normal mode:

- Press any key

- Move the active pointing device (internal or external, PS/2 or serial)

- Have the Resume Timer set and let it be matched

- Open the display cover

- Experience an incoming PC card modem event

Hibernation Mode

In Hibernation mode, all power shuts off (the computer does not consume any power). The computer saves all system information onto the hard disk before it enters Hibernation mode. Once you turn on the power, the computer restores this information and resumes where you left off upon leaving Hibernation mode.

There are two necessary conditions for the computer to enter Hibernation mode:

- The Hibernation file created by PhDISK must be present and valid. See "PhDISK" on page 73.

- Heuristic Power Management must be set to [ENABLED].

In this situation, there are four ways to enter Hibernation mode:

- Pressing the Hibernation hot key **Fn-F4**

- If the waiting time determined by the computer's HPM unit elapses without any system activity

- If a battery low condition occurs and the Battery Low Suspend parameter in Setup is set to [ENABLED].

- Invoked by the operating system power saving modes

Note: If the computer beeps but does not enter Hibernation mode after pressing the Hibernation hot key, it means the operating system will not allow the computer to enter the power-saving mode.

To exit Hibernation mode, press the power switch. The computer also resumes from Hibernation mode if the resume timer is set and matched. The computer also resumes via the network if the Wake On LAN parameter is enabled.

> *Note: Do not change any devices (such as add memory or swap hard disks) when the computer is in Hibernation mode.*

Advanced Power Management

This computer supports the APM standard designed to further reduce power consumption. APM is a power-management approach defined jointly by Microsoft and Intel. An increasing number of software packages support APM to take advantage of its power-saving features and allows greater system availability without degrading performance.

For more information about APM under Windows 95, refer to your Windows 95 user's manual.

> *Note: If you enable heuristic power management in Setup without APM installed and enabled (true by default), the system time and date do not display the correct settings after the computer returns to normal operation from Standby or Hibernation mode. To update the time and date, reboot the computer. APM should be enabled to avoid this problem. Advanced Power Management greatly prolongs battery life. Use APM whenever possible.*

PhDISK

The PhDISK utility allows your computer to enter hibernation mode. Before entering hibernation mode, your computer saves all necessary computer information into a file or partition created by PhDISK, then shuts off power to all system components. On the next startup, the computer reloads the information from the PhDISK file or partition and resumes from where you left off.

Note: By default, this program is automatically loaded and set up on your computer so you do not need to run this program by yourself. You only need to run this if you upgrade your memory. You can find PhDISK in the \windows\command\ directory.

The program accepts the following parameters:

Syntax

PHDISK [options]

where options:

- /CREATE (/FILE or /PARTITION) creates the hibernation file or partition
- /DELETE (/FILE or /PARTITION) deletes the hibernation file or partition
- /INFO displays information on the hibernation file or partition
- /REFORMAT PARTITION reformats the existing hibernation file or partition

Note: The Hibernation file is a hidden file named SAVE2DSK.BIN; DO NOT delete or alter this file in any way except by using the PHDISK utility. Improper deletion or alteration of this file could cause you to lose all access to your computer.

Example:

- C:/phdisk/create/file
- C:/phdisk/create/partition

Machine Disassembly

This chapter contains procedures on how to disassemble the notebook computer for maintenance and troubleshooting.

To disassemble the computer, you need the following tools:

- • Wrist grounding strap and conductive mat for preventing electrostatic discharge
- • Flat-bladed screwdriver
- • Phillips screwdriver
- • Hexagonal screwdriver
- • Tweezers
- • Plastic stick

The flowchart on the following page gives a clearer and more graphic representation off the entire disassembly sequence. Please refer to it from time to time, together with the screw list below. For a more detailed disassembly procedure, please refer to the Service CD kit.

The screws for the different components vary in size. During the disassembly process, group the screws together with the corresponding components to avoid mismatch when putting back the components.

Disassembly Flowchart

MODEM Door → MODEM Board (A x 1)

DIMM Door → DIMM Board (A x 1)

Battery Cover → Battery Pack

Lower Case → FDD Module (H x 1, J x 4)

Lower Case → CPU Heat Sink (L x 3, J x 4) → IMM Module (H x 1) → IMM Shield → Fan (c x 2) → Main Board → IDE Board

Main Board → DC-DC & Charger Board

Main Board → PCMCIA Socket (M x 4)

Middle Cover → Upper Heat Sink (E x 1, N x 1)

Machine Case → Top Cover (G x 5 (on the back), I x 2 (on the top), E x 1 (on the top), H x 2 (on the top))

Top Cover → Left or Right Channel Speaker (J x 4)

Top Cover → TouchPad Bracket (J x 4) → TouchPad Button → TouchPad

Middle Cover → Keyboard

LCD Hinge Cover (F x 2, G x 2, B x 2(13.1"), L x 1(13.3")) → LCD Module (H x 3, C x 2) → LCD Bezel

LCD Bezel → Internal Micphone

CD-ROM Module or LS120, DVD

HDD Module

LCD Panel (J x 2) → LED Board → LED Cable

LCD Panel (H x 4) → Right & Left Hinge

Right & Left Hinge (J x 2, K x 4(12.1"), H x 4(13.3")) → LCD Unit and Inverter Board → LCD FPC Cable

SCREW LIST
A:M2x4L(B/ZN)(NYLOK)
B:M2x12L(NI)
C:M2.5x4L(NI)(NYLOK)
D:M2.5x6L(NI)(NYLOK)
E:M2x4L(NI)
F:M2.5x13.5L(B/ZN)(NYLOK)
G:M2.5x8L(B/ZN)(NYLOK)
H:M2.5x6L(B/ZN)(NYLOK)
I:M2.5x18L(B/ZN)
J:M2x4L(NI)
K:M3x5L(NI)
L:M2x18L(NI)
M:M2x14L(NI)
N:M2.5x15L (B/ZN)x1

Installing Memory

Disassembling the DIMM module:

1. To remove the DIMM module, remove the screw from the DIMM cover.
2. Use a tweezers to remove the cover.
3. Use a flat-bladed screwdriver to push out the locks at both sides of the DIMM socket.
4. Remove the DIMM module.

Disassembling the modem board

1. Remove the modem board by removing the screw.
2. Pull out the cover gently.
3. Remove the modem board using a flat-bladed screwdriver.
4. Reconnect the modem board to CN26 & CN27 on the mainboard.
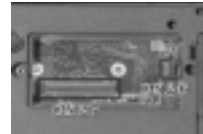
Removing the Hard Disk Drive

1. To remove the internal hard disk drive, remove the screw with a flat-bladed screwdriver or a coin.
2. Carefully pull out the hard disk drive cover to remove.

Disassembling the hard disk drive:

1. To disassemble the hard disk module, remove the 2 screws on both sides of the hard disk drive.
2. Separate the hard disk drive from its bezel.
3. Remove the hard disk drive from it's shield plate

4. Disconnect the hard disk cable from the hard disk drive.
5. To re-connect the hard disk cable, be sure that the 1st pin is aligned up as indicated.

Removing the battery pack:

1. To remove the battery pack, press the battery compartment cover latch and slide the cover out.
2. Pull out the battery pack.
3. To reinsert the battery pack, slide in the battery pack.
4. And slide the battery compartment cover into its place.

Disassembling the CD-ROM drive:

1. Push the CD-ROM drive locker forward and carefully pull out the CD-ROM module.
2. To disassemble the CD-ROM module, remove the 2 screws from both sides of the CD-ROM module and the screw on the CD-ROM chassis.

3. Remove the CD-ROM drive from the CD-ROM chassis.
4. Disconnect the cable of the CD-ROM drive.

Removing the keyboard

1. Remove the hinge cover by sliding it out.
2. Remove the middle cover by using a flat-bladed screwdriver to release the latches.
3. Lift the cover to remove

4. Replace the middle cover.
5. The latches of the middle cover and the upper case must be matched, then place it into position.

6. Pull the keyboard up and outward to expose the keyboard connector at CN22.
7. The keyboard can be removed by releasing this connector.

Removing the Display Module

1. Disconnect the LED cable from the main board at CN13.
2. Remove the 2 screws of the LCD FPC cable.
3. Disconnect the LCD FPC cable from the motherboard at CN12.
4. Disconnect the internal microphone power cable on CN9 of the main board.

5. Remove the 2 screws at the base and at the back of the lower case.
6. Carefully detach the display from the main unit

Removing the heat sink:

1. To detach the upper case, first remove the 2 screws from the heatsink.
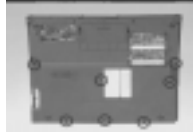2. Lift out the heat sink.

Disassembling the Upper Case

Disassembly procedure of the upper case:

1. Remove the 11 screws from the upper case and base unit.
2. Disconnect the mouse cable at CN18 and the floppy drive cable at CN17.
3. Disconnect the suspend mode cable at CN7, the left channel speaker at CN8 and the right channel speaker at CN10 from the main board.

TouchPad bracket disassembly procedure

1. Remove the 4 screws of the touch pad cover.
2. Detach the touch pad cover from the left and right side latches, then remove the touch pad cover.
3. Disconnect the touch pad cable from the touch pad board.

4. Remove the touch pad board from the upper case.

5. Remove the right channel speaker by removing it's 2 screws.

6. To separate the left channel speaker from the upper case, release the speaker cable from it's latch.

Disassembling the CPU:

1. Remove the 7 screws on the CPU heat sink.
2. Remove the CPU heat sink.
3. Lift the MMO CPU module up and remove.
4. Disconnect the IMM CPU module at U22.
5. Disconnect the SIR-Lens assembly from the lower case..
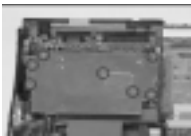
Disassembling the fan:

1. Disconnect the fan power cable at CN23 from the main board.
2. Remove the screw of the IMM shield.
3. Lift the IMM shield.
4. Remove the 2 screws from the fan and separate the fan from the IMM shield.
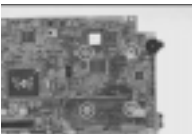
Disassembling the lower case:

1. Remove the main board from the lower case.
2. Disconnect the DC-DC charger board from the main board at CN24 and CN21.
3. Remove the IDE card from the main board at CN30.

4. Remove the 4 screws on the PCMCIA card.
5. Lift the PCMCIA card from the main board at CN16.
6. This completes the disassembly procedure of the lower case.

Disassembling the LCD:

1. Remove the 5 screws on the display bezel.
2. Pull out the LCD bezel carefully.
3. Remove the internal microphone from the display panel.
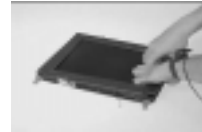
4. Remove the 2 screws located at either side of the LED board.
5. Lift off the LED board from the display.
6. Remove the 2 screws which secure the inverter board.
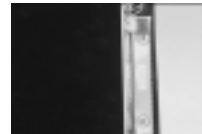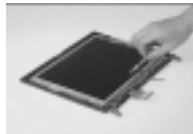
7. Remove the 4 screws from the LCD.
8. Detach the LCD and inverter board from the display panel.
9. Remove the inverter board by disconnecting the FPC cable and the LCD power cable.
10. Remove the FPC cable from the display.

Troubleshooting

Use the following procedure as a guide for computer problems.

> *Note: The diagnostic tests are intended to test only Acer products. Non-Acer products, prototype cards, or modified options can give false errors and invalid system responses.*

1. Obtain the failing symptoms in as much detail as possible.
2. Verify the symptoms by attempting to re-create the failure by running the diagnostic test or by repeating the same operation.

   Note: To run the diagnostics, refer to "Running the Diagnostics".

3. Use the following table with the verified symptom to determine which page to go to. Search the symptoms column, and find the description that best matches your symptom; then go to the page shown in the "Go To" column.

Symptoms (Verified)	Go To
Power failure. (The power indicator does not go on or stay on.)	"Power Systems Checkout".
POST does not complete. No beep or error codes are indicated.	"Symptom-to-Spare Part Index", and then use the No Beep Symptoms table.
POST beeps, but no error codes are displayed.	"Symptom-to-Spare Part Index", and then use the Beep Symptoms table.
POST detected an error and displayed numeric error codes.	"Symptom-to-Spare Part Index", and then use the Numeric Error Codes table.
The diagnostic test detected an error and displayed a Spare Part code.	"Running the Diagnostics".
The configuration is not the same as the installed devices.	"Checking the Installed Devices List".
Other symptoms (such as LCD display problems).	"Symptom-to-Spare Part Index", and then use the Other Symptoms table.
Symptoms cannot be re-created (intermittent problems).	Use the customer-reported symptoms and go to "Symptom-to-Spare Part Index".

Diskette Drive Checkout

Do the following to isolate the problem to a controller, driver, or diskette. A write-enabled, diagnostic diskette is required.

> Note: Make sure that the diskette does not have more than one label attached to it. Multiple labels can cause damage to the drive or cause the drive to fail.

Do the following to select the test device. See "Running the Diagnostics" for details.

1. Boot from the diagnostics diskette and start the PQA program (please refer to "Running PQA Diagnostics Program").
2. Go to the diagnostic Diskette Drive in the test items.
3. Press F2 in the test items.
4. Follow the instructions in the message window.

If an error occurs with the internal diskette drive, reseat the connector on the Main board.

If the error still remains:

1. Reseat the diskette drive.
2. Replace the diskette driver cable.
3. Replace the diskette.
4. Replace the IDE board
5. Replace the Main board.

CD-ROM Driver Test

Do the following to isolate the problem to a controller, drive, or CD-ROM. Make sure that the CD-ROM does not have any label attached to it. The label can cause damage to the drive or can cause the drive to fail.

Do the following to select the test device:

1. Boot from the diagnostics diskette and start the PQA program (please refer to "Running PQA Diagnostics Program".
2. Go to the diagnostic CD-ROM in the test items.
3. Press F2 in the test items.
4. Follow the instructions in the message window.

If an error occurs, reseat the connector on the Main board. If the error still remains:

1. Reseat CD-ROM drive.

2. Replace the CD-ROM drive.
3. Replace the IDE board.
4. Replace the Main board.

Keyboard or Auxiliary Input Device Checkout

Remove the external keyboard if the internal keyboard is to be tested.

If the internal keyboard does not work or an unexpected character appears, make sure that the flexible cable extending from the keyboard is correctly seated in the connector on the sub card.

If the keyboard cable connection is correct, run the Keyboard Test. See "Running the Diagnostics" for details.

If the tests detect a keyboard problem, do the following one at a time to correct the problem. Do not replace a nondefective Spare Part:

1. Reseat the keyboard cables.
2. Replace the keyboard.
3. Replace the Main board.

The following auxiliary input devices are supported for this computer:

- Numeric keypad
- External keyboard (with keyboard/mouse cable)

If any of these devices do not work, reseat the cable connector and repeat the failing operation.

If the problem does not recur, recheck the connector. If the problem is not corrected, replace the device and then the Main board.

Memory Checkout

DIMM cards are available for increasing memory capacity.

Slot 1 (MB)	Slot 2 (MB)	Total Memory (MB)
8	0	8
8	8	16
16	0	16
8	16	24
16	8	24
16	16	32
32	0	32

Slot 1 (MB)	Slot 2 (MB)	Total Memory (MB)
8	32	40
32	8	40
16	32	48
32	16	48
32	32	64
64	0	64
8	64	72
64	8	72
16	64	80
64	16	80
32	64	96
64	32	96
64	64	128

Memory errors might stop system operations, show error messages on the screen, or hang the system.

1. Boot from the diagnostics diskette and start the PQA program (please refer to "Running PQA Diagnostics Program".
2. Go to the diagnostic memory in the test items.
3. Press F2 in the test items.
4. Follow the instructions in the message window.

    Note: Make sure that the DIMM is fully installed into the connector. A loose connection can cause an error.

Flash Memory Update:

The flash Memory Update: The flash memory update is required for the following conditions:

- New versions of system programs
- New features or options

Power System Checkout

To verify the symptom of the problem, power on the computer using each of the following power sources:

1. Remove the battery pack and diskette drive.
2. Connect the AC Adapter and check that power is supplied.
3. Disconnect the AC Adapter and install the charged battery pack; then check that power is supplied by the battery pack.

If you suspect a power problem, see the appropriate power supply checkout in the following list:

- "Checking the AC Adapter"
- "Checking Operational Charging"
- "Checking the Battery Pack"

Checking the AC Adapter:

- You are here because the computer fails only when the AC Adapter is used:
- If the power problem occurs only when the port replicator is used, replace the port replicator.
- If the power-on indicator does not turn on, check the power cord of the AC Adapter for correct continuity and installation.
- If the operational charge does not work, go to "Checking Operational Charging."
1. Unplug the AC Adapter cable from the computer and measure the output voltage at the plug of the AC Adapter cable. See the following figure

:
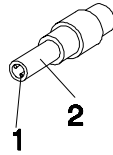
Pin	Voltage (Vdc)
1	+19 to +20.5
2	Ground

If the voltage is not correct, replace the AC Adapter.

If the voltage is within the range, do the following:

- Replace the Main board.
- If the problem is not corrected, go to "Undetermined Problems".
- If the voltage is not correct, go to the next step.

Note: An audible noise from the AC Adapter does not always indicate a defect.

Checking Operational Charging:

To check operational charging, use a discharged battery pack or a battery pack that has less than 50% of the total power remaining when installed in the computer.

Perform operational charging. If the battery status indicator does not turn on, remove the battery pack and let it return to room temperature. Reinstall the battery pack.

If the charge indicator still does not turn on, replace the battery pack. If the charge indicator still does not turn on, replace the Main board. Then reinstall the battery pack. If the reinstalled battery pack is not charged, go to the next section.

Checking the Battery Pack:

Battery charging will not start until the Fuel-Gauge shows that less than 95% of the total power remains; with this condition the battery pack can charge to 100% of its capacity. This protects the battery pack from being overcharged or having a shortened life.

Do the following:

1. Power off the computer.
2. Remove the battery pack and measure the voltage between battery terminals 1 (+) and 7. See the following figure:
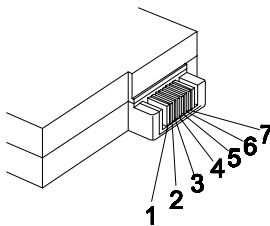
If the voltage is still less than +10.0 Vdc after recharging, replace the battery.

TouchPad Checkout

If the TouchPad does not work, check the configuration in the ThinkPad BIOS program. If the configuration of the TouchPad is disabled, select Enable to enable it.

If this does not correct the TouchPad problem, continue with the following. After you use the TouchPad, the pointer drifts on the screen for a short time. This self-acting pointer movement can occur when a slight, steady pressure is applied to the TouchPad pointer. This symptom is not a hardware problem. No service actions are necessary if the pointer movement stops in a short period of time.

If a click button problem or the pointing stick problem occurs, do the following:

1. Boot from the diagnostics diskette and start the PQA program (please refer to "Running PQA Diagnostics Program".
2. Go to the diagnostic Pointing Dev. in the test items.
3. Press F2 in the test items.
4. Follow the instructions in the message window.

If either the pointing stick or the click button do not work, do the following actions one at a time to correct the problem. Do not replace a nondefective Spare Part:

1. Reseat the TouchPad cables.
2. Replace the TouchPad.
3. Replace the TouchPad.

Symptom-to-Spare Part Index

The symptom-to-Spare Part index lists the symptoms and errors and their possible causes. The most likely cause is listed first.

> *Note: Perform the Spare Part replacement or actions in the sequence shown in the "Spare Part/Action" columns. If a Spare Part replacement did not solve the problem, put the original part back in the computer. Do not replace a nondefective Spare Part.*

This index can also help you determine the next possible Spare Part to be replaced when servicing a computer.

Numeric error codes show the errors detected in POST or system operation. If no codes are available, use narrative symptoms.

If the symptom is not listed, go to "Undetermined Problems" .

Numeric Error Codes

The following is a list of the message that the BIOS can display. Most of them occur during POST. Some of them display information about a hardware device, e.g., the amount of memory installed. Others may indicate a problem with a device, such as the way it has been configured. Following the list are explanations of the messages and remedies for reported problem.

> *Note: If the system fails after you make changes in the Setup menus, reset the computer, enter Setup and install Setup defaults or correct the error*

Numeric error Codes

Symptom / Error	Spare Part / Action in Sequence
0200 Failure Fixed Disk	1. Reseat Hard disk driver. 2. "Load Setup Defaults" in BIOS Setup Utility. 3. Hard disk driver 4. Main board
0211 Stuck Key	1. Go to "Keyboard or Auxiliary Input Device Checkout".
0211 Keyboard error	1. Go to "Keyboard or Auxiliary Input Device Checkout".
0212 Keyboard Controller Failed	1. Go to "Keyboard or Auxiliary Input Device Checkout".
0213 Keyboard locked - Unlock key switch	1. Unlock external keyboard

Numeric error Codes

Symptom / Error	Spare Part / Action in Sequence
0220 Monitor type does not match CMOS - Run Setup	1. Run "Load Setup Defaults" in BIOS Setup Utility.
0230 Shadow RAM Failed at offset: nnnn	1. BIOS ROM 2. Main board
0231 System RAM Failed at offset: nnnn	1. DIMM 2. Main board
0232 Extended RAM Failed at offset:nnnn	1. DIMM 2. Main board
0250 System battery is dead - Replace and run Setup	1. Replace backup battery(RTC) and Run SETUP to reconfigure System time, then reboot system.
0251 System CMOS checksum bad - Default configuration used	1. Backup battery(RTC) 2. Run SETUP to reconfigure System, then reboot system.
0260 System timer error	1. Backup battery(RTC) 2. Run SETUP to reconfigure System, then reboot system. 3. Main board
0270 Real time clock error	1. Backup battery(RTC) 2. Run SETUP to reconfigure System, then reboot system. 3. Main board
0280 Previous boot incomplete - Default configuration used	1. Run "Load Setup Defaults" in BIOS Setup Utility. 2. Backup battery (RTC) 3. Main board
0281 Memory size found by POST differed from CMOS	1. Run "Load Setup Defaults" in BIOS Setup Utility. 2. DIMM 3. Main board
02B0 Diskette driver A error	1. Check the drive is defined with the proper diskette type in Setup 2. Go to "Diskette Drive Checkout".
02B2 Incorrect Drive A type - run SETUP	1. Check the drive is defined with the proper diskette type in Setup 2. Go to "Diskette Drive Checkout".
02D0 System cache error - Cache disabled	1. IMM (CPU board) 2. Main board
02F0 CPU ID:	1. IMM (CPU board) 2. Main board

Numeric error Codes

Symptom / Error	Spare Part / Action in Sequence
02F5 DMA Test Failed	1. DIMM 2. IMM (CPU board) 3. Main board
02F6 Software NMI Failed	1. DIMM 2. IMM (CPU board) 3. Main board
02F7 Fail-Safe Timer NMI Failed	1. DIMM 2. IMM (CPU board) 3. Main board

Error Messages

Symptom / Error	Spare Part / Action in Sequence
Device Address Conflict	1. Run "Load Setup Defaults" in BIOS Setup Utility. 2. Backup battery (RTC) 3. Main board
Allocation Error for: device	1. Run "Load Setup Defaults" in BIOS Setup Utility. 2. Backup battery (RTC) 3. Main board
Failing Bits: nnnn	1. DIMM 2. BIOS ROM 3. Main board
Fixed Disk n	1. None
Invalid System Configuration Data	1. BIOS ROM 2. Main board
I/O device IRQ conflict	1. Run "Load Setup Defaults" in BIOS Setup Utility. 2. Backup battery (RTC) 3. Main board
Operating system not found	1. Enter Setup and see if fixed disk and drive A: are properly identified. 2. Diskette Driver 3. Hard Disk 4. Main board

No Beep Symptoms

Symptom / Error	Spare Part / Action in Sequence
No beep, power-on indicator on, and a blank LCD not POST	1. Ensure every connector correctly 2. DIMM 3. Reseat IMM (CPU board) 4. IMM (CPU board) 5. Main board

No Beep Symptoms

Symptom / Error	Spare Part / Action in Sequence
No beep, power-on indicator not on, and a blank LCD during POST	1. Reseat LCD connectors 2. LCD inverter ID 3. LCD FPC cable 4. LCD inverter 5. LCD 6. LED board 7. Main board
No beep, power-on indicator on, and a blank LCD during POST.	1. Reseat the LCD connectors 2. LCD inverter ID 3. LCD FPC Cable 4. LCD inverter 5. LCD 6. Main board
No beep during POST but system runs correctly.	1. Speaker

LCD-Related Symptoms

Symptom / Error	Spare Part / Action in Sequence
• LCD backlight not working • LCD too dark • LCD brightness can not be adjusted • LCD contrast cannot be adjusted	1. Reseat the LCD connector 2. Keyboard (if control is from the keyboard) 3. LCD inverter ID 4. LCD FPC Cable 5. LCD inverter 6. LCD 7. Main board
• LCD screen unreadable • Characters missing pels • Screen abnormal • Wrong color displayed	1. Reseat the LCD connector 2. LCD inverter ID 3. LCD FPC Cable 4. LCD inverter 5. LCD 6. Main board
LCD has extra horizontal or vertical lines displayed.	1. LCD inverter ID 2. LCD inverter 3. LCD FPC Cable 4. LCD 5. Main board

Keyboard/TouchPad-Related Symptoms

Symptom / Error	Spare Part / Action in Sequence
Keyboard (one or more keys) does not work.	1. Reseat the keyboard cable. 2. Keyboard 3. Main board
TouchPad does not work.	1. Reseat TouchPad cable. 2. TouchPad board 3. Main board

Indicator-Related Symptoms

Symptom / Error	Spare Part / Action in Sequence
Indicator incorrectly remains off or on, but system runs correctly	1. Reseat the LED board 2. LED board 3. Main board

Power-Related Symptoms

Symptom / Error	Spare Part / Action in Sequence
Power shuts down during operation	1. Battery 2. AC Adapter 3. DC/DC & Charge board 4. Main board
The system will not power-on.	1. Battery 2. AC adapter 3. DC/DC & Charge boar 4. Main board
The system will not power-off	1. DC/DC & Charge board 2. Main board
Battery can't be charge	1. Battery 2. DC/DC & Charge board 3. IDE board 4. Main board

PCMCIA-Related Symptoms

Symptom / Error	Spare Part / Action in Sequence
System cannot detect the PCMCIA	1. PCMCIA slots assembly 2. Main board

Memory-Related Symptoms

Symptom / Error	Spare Part / Action in Sequence
Memory count (size) appears different from actual size.	1. Enter BIOS Utility to execute load setup default settings, then reboot system. 2. DIMM 3. Main board

Speak-Related Symptoms

Symptom / Error	Spare Part / Action in Sequence
Speakers have noise or no sound comes from system	1. Speaker 2. Main board

Power Management-Related Symptoms

Symptom / Error	Spare Part / Action in Sequence
The system will not enter hibernation	1. Keyboard (if control is from the keyboard) 2. Hard disk 3. Main board
The system will not wake up from hibernation	1. Keyboard (if control is from the keyboard) 2. Hard disk 3. Main board
The system will not enter standby after close the LCD	1. LCD cover switch 2. Main board
Battery fuel gauge does not go higher than 90%.	1. Remove battery pack and let it cool for 2 hours. 2. Refresh battery (continue use battery until power off, then charge battery). 3. Battery 4. DC/DC & charge board 5. Main board
System configuration does not match the installed devices.	1. Enter BIOS Utility to execute load setup default settings, then reboot system. 2. Reseat CD-ROM/DVD module.
System hangs intermittently.	1. Hard Disk/CD-ROM/DVD drive connector 2. Fan 3. Main board
In DOS or Windows, multimedia programs, no sound comes from the computer.	1. Speaker 2. Main board

Peripheral-Device-Related Symptoms

Symptom / Error	Spare Part / Action in Sequence
External display does not work correctly.	1. Main board
USB does not work correctly	1. Main board
Print problems.	1. Run printer self-test. 2. Printer driver 3. Printer cable 4. Main Board
Serial or parallel port device problems.	1. Device driver 2. Device cable 3. Device 4. Main board

Note: If you cannot find a symptom or an error in this list and the problem remains, see "Undetermined Problems".

Intermittent Problems

Intermittent system hang problems can be caused by a variety of reasons that have nothing to do with a hardware defect, such as: cosmic radiation,

electrostatic discharge, or software errors. Spare Part replacement should be considered only when a recurring problem exists.

When analyzing an intermittent problem, do the following:

1. Run the advanced diagnostic test for the Main board in loop mode at least 10 times.
2. If no error is detected, do not replace any Spare Part.
3. If any error is detected, replace the Spare Part shown by the Spare Part code. Rerun the test to verify that no more errors exist.

Undetermined Problems

You are here because the diagnostic tests did not identify which adapter or device failed, installed devices are incorrect, a short circuit is suspected, or the system is inoperative. Follow these procedures to isolate the failing Spare Part (do not isolate nondefective Spare Part).

> *Note: Verify that all attached devices are supported by the computer.*
>
> *Note: Verify that the power supply being used at the time of the failure is operating correctly. (See "Power Systems Checkout"):*

1. Power off the computer.
2. Visually check them for damage. If any problems are found, replace the Spare Part.
3. Remove or disconnect all of the following devices:
   a. Non-Acer devices
   b. Devices attached to the port replicator
   c. Printer, mouse, and other external devices
   d. Battery pack
   e. Hard disk drive
   f. DIMM
   g. CD-ROM
   h. Diskette drive
   i. PC Cards
4. Power on the computer.
5. Determine if the problem has changed.
6. If the problem does not recur, reconnect the removed devices one at a time until you find the failing Spare Part.
7. If the problem remains, replace the following Spare Part one at a time. Do not replace a nondefective Spare Part:
   a. Main board
   b. LCD assembly
   c. CPU card

Utility Program Diskette

Setting LCD Panel ID

There is an EEPROM in the inverter which stores its supported LCD type ID code. If you replace a LCD with one of a different brand or use a new inverter, the ID information in the inverter EEPROM should be updated.

Follow the steps blew to see the LCD Panel ID:

1. Follow the instruction on screen to read current or to set new LCD Panel ID code.

    Note: When you set a new LCD Panel ID and the new LCD is not yet enabled (to function), so connect an external CRT to see the program execution process.

    Note: Make sure the new ID code you choose corresponds with the LCD brand and type. If you write a wrong ID into inverter, just reboot and re-execute the program and input the correct ID code.

2. Restart computer - the new LCD should work normally.

    Note: If LCD cannot display after change ID code, make sure you write the correct ID code, or try reseating the LCD FPC cable connectors.

Setting Thermal Sensor Utility

The system is equipped with sensors to protect against system overheating. By setting System and processor thermal thresholds, the system can turn on the cooling fan or shut down automatically when temperatures reach the defined threshold parameters.

Running PQA Diagnostics Program

Note: Before running PQA Diagnostic Program, make sure that the write enable tab of the Diagnostic Program Diskette is set to enable.

```
┌─────────────────────────────────────────┐
│  PQA              Vx_x    xx-xx-xx       │
├─────────────────────────────────────────┤
│                                          │
│  ┌──────┐ ┌───────┐ ┌────────┐ ┌────────┐ ┌──────┐
│  │ Diag │ │Result │ │SysInfo │ │ Option │ │ Exit │
│  └──────┘ └───────┘ └────────┘ └────────┘ └──────┘
│                                          │
│                                          │
│                                          │
│                                          │
│                                          │
│                                          │
│                                          │
└─────────────────────────────────────────┘
```
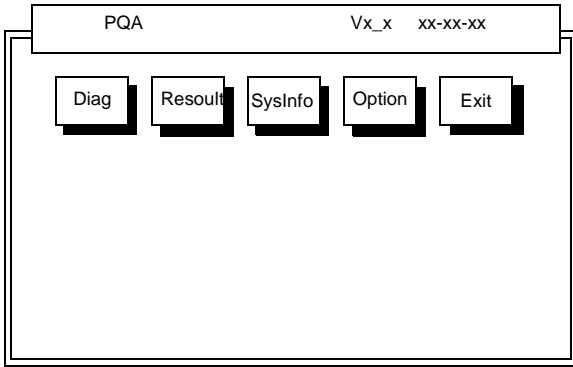
Press -> or <- to move around the main menu. Press Enter to enable the selected option. The main options are Diag, Resoult, SysInfo, Option and Exit.

The Diag option lets you select testing items and times.

The following screen appears when you select Diag from the main menu.

```
┌─────────────────────────────────────────┐
│  PQA              Vx_x    xx-xx-xx       │
├─────────────────────────────────────────┤
│                                          │
│  ┌──────┐ ┌───────┐ ┌────────┐ ┌────────┐ ┌──────┐
│  │ Diag │ │Result │ │SysInfo │ │ Option │ │ Exit │
│  └──┬───┴─┴───────┘ └────────┘ └────────┘ └──────┘
│     │     Diag      │                    │
│     │ MANUAL TEST   │                    │
│     │ AUTO   TEST   │                    │
│     └───────────────┘                    │
│                                          │
│                                          │
│                                          │
└─────────────────────────────────────────┘
```
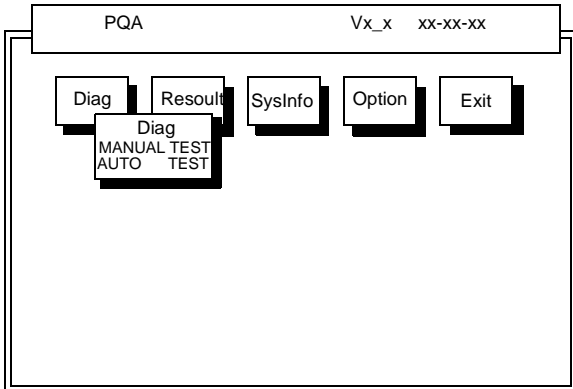
This screen allows you to specify the number of tests to perform. The options are as follows:

Manual Test Performs a single test and Manual checks the selected test items in sequence.

Auto Test Performs multiple tests of the selected items and AUTO check the select test items in sequence.

Note: PCMCIA Diagnostic Supports Manual test only. Do not select PCMCIA Diagnostic in Auto Test.

The screen below appears if you select AUTO Test.

```
 ┌─────────────────────────────────────────────────┐
 │  PQA                    Vx_x    xx-xx-xx          │
 │ ┌───────┐ ┌────────┐ ┌────────┐ ┌────────┐ ┌──────┐
 │ │ Diag  │ │Resoult │ │SysInfo │ │ Option │ │ Exit │
 │ └─────┬─┴─┴────────┘ └────────┘ └────────┘ └──────┘
 │    ┌──┴───────────┐
 │    │   Diag       │
 │    │ MANUAL TEST  │
 │    │ AUTO   TEST  │
 │    └──────────────┘
 │
 │         ┌──────────────────────────────┐
 │         │ TEST COUNT VALUE (1...9999) 1 │
 │         └──────────────────────────────┘
 │
 └─────────────────────────────────────────────────┘
```

Specify the desired number of tests and press **Enter**.

After you specify the number of tests to perform, the screen shows a list of test items (see below).

```
 ┌─────────────────────────────────────────────────┐
 │  PQA                    Vx_x    xx-xx-xx          │
 │ ┌───────┐ ┌────────┐ ┌────────┐ ┌────────┐ ┌──────┐
 │ │ Diag  │ │Resoult │ │SysInfo │ │ Option │ │ Exit │
 │ │  Diag          │ └────────┘ └────────┘ └──────┘
 │ │ M┌────────────────┐
 │ │ A│  Test Items    │
 │    │ [ ] Sytem Board │
 │    │ [ ] Memory      │
 │    │ [ ] Keyboard    │
 │    │ [ ] Video       │
 │    │ [ ] Parallel Port│
 │    │ [ ] Serial Port │ ┌─────────────────────────────┐
 │    │ [ ] Diskette Drive│ SPACE: mark/ummark selecting item│
 │    │ [ ] Hard Disk   │ │ ESC   : return to upper menu   │
 │    │ [ ] CD-ROM      │ │                                │
 │    │ [ ] Coprocessor │ │ F2    : test the marked item(s)│
 │    │ [ ] Pointing Dev.│ │ ENTER: open subitem's menu    │
 │    │ [ ] Cache       │ │ Test Times = 1                 │
 │    └────────────────┘ └─────────────────────────────┘
 └─────────────────────────────────────────────────┘
```
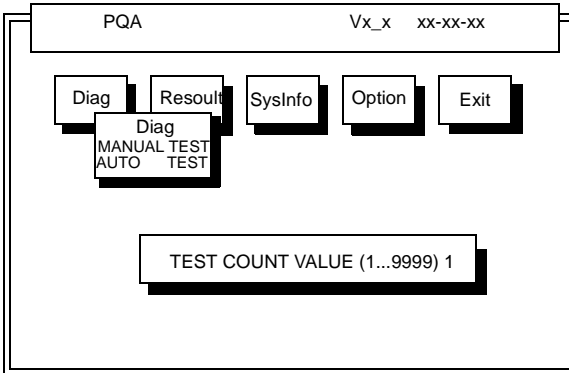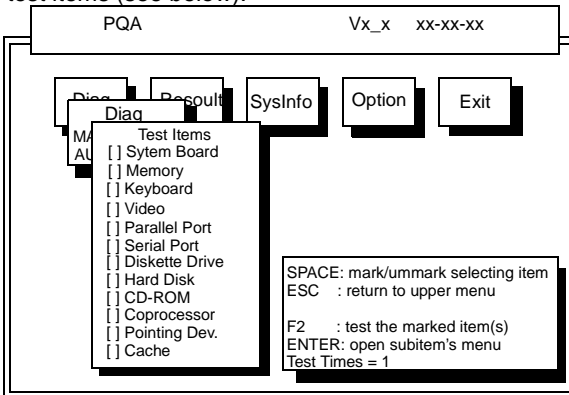
Move the highlight bar from one item to another. Press Space to enable or disable the item. Press **Enter** to view the available suboptions of each selected item. Press **Esc** to close the close the submenu.

The right corner screen information gives you the available function keys and the specified test number.

- Space   Enables/disables the item
- ESC   Exits the program
- F1   Help
- F2   Tests the selected item(s)
- Enter   Opens the available suboptions
- Test Times Indicates the number of tests to perform.

> *Note: The F1 and F2 keys function only after you finish configuring the Test option.*

PQA Diagnostic Program Error Code and Messages

\

Error Code	Message	Spare Part/Action in Sequence
System		
16XX	Backup battery error	Backup battery
1XXX	CPU or Main board error	1. Reload BIOS default setting. 2. CPU 3. Main board
2XXX	Memory error	1. Reseat CPU(IMM module) 2. DIMM 3. Main board
3XXX	Keyboard error	1. Reseat Keyboard 2. Keyboard 3. Main board
4XXX	Video error	1. Main board
5XXX	Parallel Port error	1. Main board
6XXX	Serial port or Main board error	1. Main board
7XXX	Diskette drive error	1. Diskette drive 2. Main board
8XXX	Hard disk error	1. Reload BIOS default setting. 2. Hard disk 3. Main board
9XXX	CD-ROM error	1. Reseat CD-ROM cable 2. CD-ROM drive 3. Main board
10XXX	CPU or Main board error	1. CPU 2. Main board
11XXX	Pointing device error	1. Reseat Keyboard 2. Keyboard 3. Main board

Jumpers and Connectors

Top View
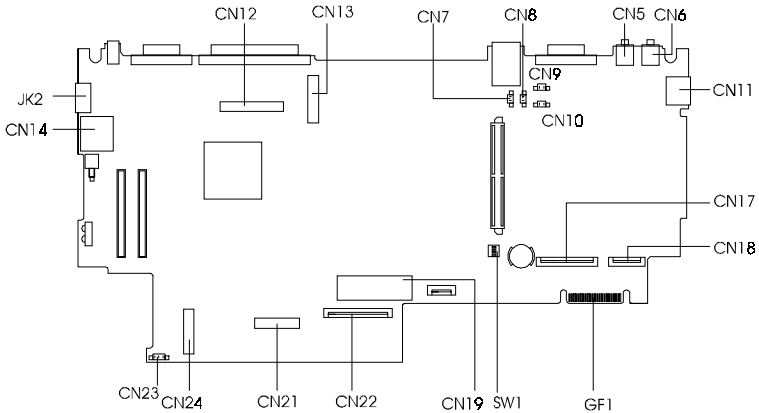
PCB No. 97143

CN12	LCD Connector	CN13	LED Connector
CN7	Cover Switch	CN8	Left Speaker
CN9	MIC	CN10	Right Speaker
CN5	MIC/Lin-In	CN6	Lin Out
CN11	PS2	CN18	PS2 mouse
GF1	Debug Board	CN17	FDD Conector
CN19	HDD Conector	CN22	Keyboard Connector
CN21& CN24	DC/DC & Charger board Connector	CN23	Fan Connector
CN14	USB Connector	JK2	S-Terminal Connector

SW1
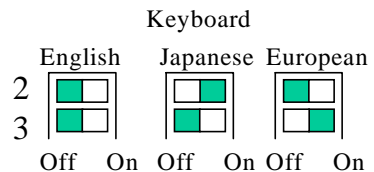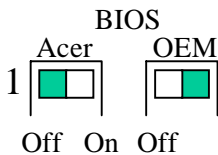
BottoM View
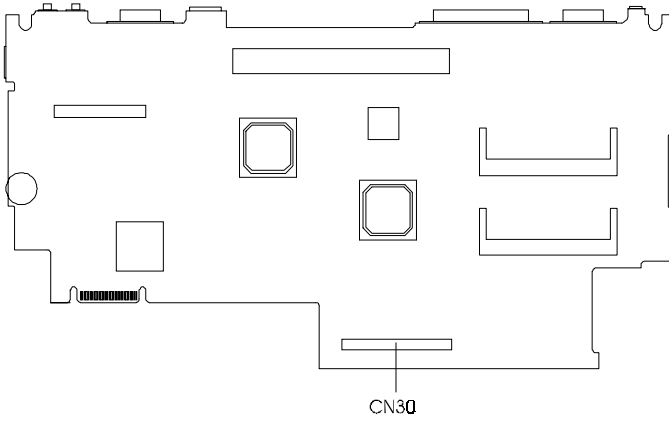
CN30   IDE Board Conector

Spare Parts List

Picture	Level	Description	Part No.
ADAPTER			
		ADT 90-264V ADP-60HB700	25.10064.011
BATTERY COVER			
	1	COVER BATTERY PC	42.47A17.001
	1	ASSY BTY PACK LI-ION LIP848NLA	60.47A01.001
CD-ROM			
	1	700 CD-ROM MODULE	6M.47A01.001

Picture	Level	Description	Part No.
	2	CD DRV CD-224E 24X	56.10061.081
	2	CABLE ASSEMBLY FPC CD-ROM 700	50.47A02.001
	2	ASSY CD-ROM CHASSIS 700	60.47A02.001
CPU			
	1	IC CPU TILLAMOOK 200M 512K1.8V	01.TLLAM.K0A
	1	IC CPU TILLAMOOK 233M 512K1.8V	01.TLLAM.N3A
	1	IC CPU TILLAMOOK 266M 512K1.8V	01.TLLAM.Q60
	1	IC CPU INT MOBILE PII-233 IMM	01.I0MP2.N30
	1	IC CPU INT MOBILE PII-266 IMM	01.I0MP2.Q60
DIMM			

Picture	Level	Description	Part No.
	1	SDIMM 64MB MH8S64AZ-10TA 3.3V	72.08S64.00E
	1	SD RAM MDL 253309-A10 16MB 3.3V	72.25330.00N
	1	SO-DIM 253409-10 32MB (NEC)	72.25349.00N
	1	SO-DIM 253509-10 64MB (NEC)	72.25359.00N
	1	DIMM KMM466S424AT-F0 100NS 32M	72.46424.04E
	1	SO-DIMM M5M4V16S30BTP-10 16MB	72.54163.00N
	1	SO-DIMM M5M4V64S40ATP-10L 32MB	72.54644.00N
DIMM DOOR			
	1	ASSY DIMM DOOR 700	60.47A05.001
FDD MODULE			
	1	ASSY FDD MODULE 700	6M.47A02.001

Picture	Level	Description	Part No.
	2	FDD1.44MB D353F3 000(3MODE)	56.01051.271
	1	FDD 120MB 3.5" LS-120/MF357H	56.01082.011
	2	BRACKET FDD SECC T-0.8	33.47A03.001
	2	CABLE ASSEMBLY FPC FDD 700	50.47A04.001
HDD MODULE			
	1	700DX HDD MODULE 2G	6M.47A03.001
	1	710T HDD MODULE 3G	6M.47A03.011
	1	711TE HDD MODULE 4GB	6M.47A03.021

Picture	Level	Description	Part No.
	2	HDD 2160MB HIT/ DK226-21U	56.02759.011
	2	HDD 3240MB 2.5" IBM/ DTCA23240	56.02995.001
	2	HDD 4090MB IBM/ DTCA24090 IDE	56.02834.071
	2	CABLE ASSEMBLY FPC HDD 2.5"700	50.47A01.001
	2	ASSY HDD SHIELD PLT 700	60.47A03.001
	2	ASSY HDD BZL 700	60.47A04.001
HEAT SINK			
	1	HEAT SINK UP AL T-08	34.47A09.001
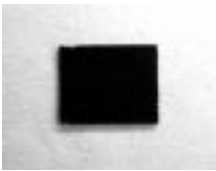
Picture	Level	Description	Part No.
	1	ASSY MMO HEAT SINK(TILLA MOOK)	60.47A11.011
	1	ASSY MMO HEAT SINK(DESCHUE)	60.47A11.001

HINGE PACK

Picture	Level	Description	Part No.
	1	ASSY HINGE 12.1" TFT/DSTN (700DX 710T)	6M.47A04.001
	1	ASSY HINGE 13.3" TFT (711TE)	6M.47A04.011

HINGE COVER

Picture	Level	Description	Part No.
	1	CAP HINGE (R) PC	42.47A14.001
	1	CAP HINGE CAP (L) PC	42.47A15.001

INVERTER

Picture	Level	Description	Part No.
	1	INVERTER T62..086.C 700	19.21030.181
	1	INVERTER T62..087.C 700	19.21030.191
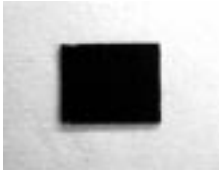
Picture	Level	Description	Part No.
KEYBOARD			
	1	NSK-84A01	91.78S07.001
	1	NSK-84A0A	91.78S07.00A
	1	NSK-85A0B	91.78S07.00B
	1	NSK-84A0C	91.78S07.00C
	1	NSK-85A0D	91.78S07.00D
	1	NSK-85A0E	91.78S07.00E
	1	NSK-85A0F	91.78S07.00F
	1	NSK-85A0G	91.78S07.00G
	1	NSK-84A0H	91.78S07.00H
	1	NSK-88A0J	91.78S07.00J
	1	NSK-84A0K	91.78S07.00K
	1	NSK-85A0N	91.78S07.00N
	1	NSK-85A0P	91.78S07.00P
	1	NSK-84A0R	91.78S07.00R
	1	NSK-85A0S	91.78S07.00S
	1	NSK-85A0T	91.78S07.00T
LCD MODULE 12.1" DSTN 700DX			
	1	700DX LCD MODULE DSTN 12.1"	6M.47A05.001
	1	MICROPHONE Acer 700DX	6M.47A08.001

Picture	Level	Description	Part No.
	2	MYLAR FOR HINGE PC 390	40.43A01.081
	2	RUBBER LCD CUSHION SILICON 050	47.46930.011
	2	C.A 15P 2C 100MM LED AN700	50.47A09.001
	2	EXTENSA 700 LED BOARD	55.47A03.001
	2	LCD SX31S002 12.1" DSTN SVGA/HI	56.0747A.031

Picture	Level	Description	Part No.
	2	ASSY LCD FPC HIT12.1 STN 700A	60.47A07.071
	2	ASSY LCD PNL (HIT12.1"DSTN)700	60.47A08.031
	2	ASSY LCD BZL (12.1") 700	60.47A09.021
LCD MODULE 12.1" TFT 710T			
	1	710T LCD MODULE TFT 12.1"	6M.47A05.011
	1	MICROPHONE Acer 700DX	6M.47A08.001

Picture	Level	Description	Part No.
	2	MYLAR FOR HINGE PC 390	40.43A01.081
	2	RUBBER LCD CUSHION SILICON 050	47.46930.011
	2	C.A 15P 2C 100MM LED AN700	50.47A09.001
	2	EXTENSA 700 LED BOARD	55.47A03.001
	2	LCD ITSV50D1 12.1 55+/-5 700	56.0742A.031

Picture	Level	Description	Part No.
	2	ASSY LCD FPC IBM 12.1 TFT 700A	60.47A07.081
	2	ASSY LCD PNL (IBM12.1")700	60.47A08.021
	2	ASSY LCD BZL (12.1") 700	60.47A09.021
LVDS BOARD 13.3" 711TE			
	1	EXTENSA 700 LVDS BOARD	55.47A05.001
LCD MODULE 13.3" TFT 711TE			
	1	711TE LCD MODULE TFT 13.3"	6M.47A05.021

Picture	Level	Description	Part No.
	1	MICROPHONE Acer 700DX	6M.47A08.001
	2	MYLAR FOR HINGE PC 390	40.43A01.081
	2	RUBBER LCD CUSHION SILICON 050	47.46930.011
	2	C.A 15P 2C 100MM LED AN700	50.47A09.001
	2	EXTENSA 700 LED BOARD	55.47A03.001

Picture	Level	Description	Part No.
	2	LCD TX34D62VC1CAC 13.3 TFT XGA	56.0747A.001
	2	ASSY LCD FPC (HIT13.1TFT) 700A	60.47A07.091
	2	ASSY LCD PNL (HIT13.3"TFT) 700	60.47A08.001
	2	ASSY LCD BZL (13.3") 700	60.47A09.001
LOWER CASE			
	1	ASSY LOW CASE 700	60.47A14.002

Picture	Level	Description	Part No.
	2	FOOT PU BLACK 350P	47.45001.001
MAINBOARD			
	1	EXTENSA 700 MAIN BOARD	55.47A01.001
	2	DC/DC &CHARG T62.085.C 700	19.21030.171
	2	EXTENSA 700 IDE TRANSFER BOARD	55.47A04.001
	2	BTY LI 3V CR1220 36MAH	23.20004.091
MIDDLE COVER			

EXTENSA 700/710 Service Guide

Picture	Level	Description	Part No.
	1	COVER MIDDLE PC	42.47A16.001
MMO SHLD			
	1	SSY MMO SHLD 700	60.47A13.002
	1	FAN 30*30*10 UDQFB3E65F0A(WIRE)	23.10033.001
MODEM			
	1	MODEM 56K CSI AC-5614BMC 365	54.09011.131
MODEM DOOR			
	1	ASSY MODEM DOOR 700	60.47A06.001

Picture	Level	Description	Part No.
PLATE NAME EX700			
	1	PLATE NAME (LOGO) PC AN390	40.43A02.001
	1	PLT NAME PC AN700	40.48406.161
	1	PLT NAME (710) PC AN700	40.48406.201
POWER CORD			
	1	CORD SPT-2 #18*2C 7A125V1830MM	27.01618.001
SCRW PACK			
		700 SCRW	6M.47A07.001
SIR-LENS ASSY			
	1	ASSY SIR-LENS 700	60.47A10.001
TOUCHPAD			
	1	CABLE ASSEMBLY FPC TOUCHPAD700	50.47A03.001

Picture	Level	Description	Part No.
	1	TOUCH PAD SYNAPTICS/TM4-220	56.1748A.001
	1	ASSY TOUCH PAD 700	60.47A12.001
	1	ASSY UPPER CASE 700	60.47A15.003
	1	SPK 1W 3520-7CC W/ CABLE 700DX	6M.47A09.001

LEVEL 1 : Stands for Field Replaceable Units (FRU) and Customer Replaceable Units (CRU) for system level 1 service repair use.

LEVEL 2 : Stands for subassemblies of FRUs and CRUs which are for component level service repair use

A p p e n d i x A

Model Definition

700 Model Number Define

Model Number	LCD	CPU	Memory	HDD	Battery
700DX	12.1" SCC	Tillamook -200	32MB	2.1GB	Li-Ion
700T	12.1" TFT	PII-233	32MB	2.1GB	Li-Ion
710DX	12.1" SCC	PII-233	32MB	2.1GB	Li-Ion
710T	12.1" TFT	PII-233	32MB	3.2GB	Li-Ion
710TE	13.3" TFT	PII-233	32MB	4GB	Li-Ion
711TE	13.3" TFT	PII-266	64MB	4G	Li-Ion

EXTENSA 700/710 Service Guide

Compatibility Test

System Configuration

System Board	700-97143-SD
CPU	Intel Pentium MMX-166/200/233/266 Intel Pentium II 233/266
Coprocessor	On-chip
Main Memory	2 DIMM sockets, from 16MB up to 128MB
Cache	512KB L2 Cache on IMM
System Chip Sets	Intel 430TX/82371AB PIIX4E Intel 440TX/82371AB PIIX4E
System BIOS	1.0 R01-36
Flash ROM	MXIC 28F002
IDE	Include by 82371AB PIIX4
SIO	NS 97338
KBC	Mitsubishi M38867
VGA	NeoMagic NM2160B
PCMCIA Ctrl.	TI 1250A
Audio	ESS Mastero II
Keyboard	Internal Keyboard
Mouse Interface	PS/2 Mouse
LCD	TFT 1024x768 TFT 800x600 STN800x600
S.P.S.	Delta Electronics, Inc Model:ADP-60BB Rev. D

Microsoft Windows 95

Application packages test

OA kit test

Env.	Application name	Version	Vendor	Test result
Windows 95	Office Professional	V7.0	Microsoft	Pass
	Word			
	PowerPoint			
	Excel			
	Access			
	Schedule			

Communication test

Env.	Application name	Version	Vendor	Test result
Windows 95	Laplink	V7.5	Traveling software	Pass

Diagnostic test

Env.	Application name	Version	Vendor	Test result
Windows 95	QAplus/WIN	R7.1	Diagsoft	Pass
Note: When select test memory will cause the program error and the program will be closed.				

CD title

Class	CD name	Test result
Education	Great cities of world	Pass
	Encyclopedia	Pass
	Microsoft bookshelf '96	Pass
	Micro cinemania '96	Pass
	Microsoft Encarta '96	Pass
	Microsoft home service CD disc	Pass
Photo CD	Powerphoto CD	Pass
	Coreldraw photo CD	Pass

CD title

Class	CD name	Test result
Music	The great fantasy adventure album	Pass
	Super bass sound	Pass
	3 dimensional sound	Pass
	High resolution	Pass
	Music highlights	Pass
Game	Diabb	Pass
	KKND	Pass
	Tomb raider	Pass
	Mercer mayer's just grandma and me	Pass
	Total annihilation	Pass
	Microsoft golf	Pass
	Virtua fighter 2	pass
	Zoombini	Pass
Video CD 1.x, 2.0	Karaok CD	Pass
	ovies CDs	Pass

PCMCIA Card

ATA Drive

Model name	Vendor	Test result
VIPER 170E (170MB)	VIPER	Pass
SunDisk ST72P5 (2.5MB)	Seagate	Pass
SunDisk ST75P5 (5MB)	Seagate	Pass
SunDisk ST710P5 (10MB)	Seagate	Pass
SunDisk ST720P5 (20MB)	Seagate	Pass
ATA flash card FL4M5VA (4MB)	Viking	Pass
ATA flash card FL8M5VA (8MB)	Viking	Pass
ATA flash card FL16M5VA (16MB)	Viking	Pass

SCSI Card

Model name	Vendor	Test result
APA-460 slim SCSI	Adaptec	Pass
APA-1480 SCSI	Adaptec	Pass

CD-ROM

Model name	Vendor	Test result
KXL-D740 (x4, SCSI)	Panasonic	Pass

ZV Card

Model name	Vendor	Test result
Margi	Margi	Pass
FujiFilm	Fuji	Pass

Peripheral devices test

Floppy disk drive

Device Name	Bus type	Vendor	Test result
D353F3 internal FDD	3.5", 1.44MB	Mitsumi	Pass

Hard disk drive

Device name	Bus type	Vendor	Test result
DTNA-22160	IDE	IBM	Pass
DTCA-23240	IDE	IBM	Pass

Hard disk drive

Device name	Bus type	Vendor	Test result
DTCA-24090	IDE	IBM	Pass

IDE Drive

Device name	Bus type	Vendor	Test result
UJDA150 (CD-ROM)	IDE (24X)	Matsushita	Pass
MF357H-252MR (LS-120)	IDE	Mitsubishi	Pass

Keyboard

Device name	Type	Vendor	Test result
Acer 6511	PS/2 (104key)	Acer	Pass
Acer 6512	PS/2 (105 key)	Acer	Pass
Acer 6017 (keypad)	PS/2 (17 key)	Acer	Pass
Natural keyboard	PS/2 (104 key)	Microsoft	Pass

Mouse

Device name	Type	Vendor	Test result
Microsoft PS/2 mouse	PS/2	Microsoft	Pass
Microsoft Intellimouse	PS/2	Microsoft	Cursor crazy
Acer S-34 PS/2 mouse	PS/2	Acer	Pass
Logitech PS/2 mouse	PS/2	Logitech	Pass
Addonics PRO-5	Serial	Addonics	Pass
Microsoft home mouse-serial	Serial	Microsoft	Pass
Internal TouchPad	TouchPad	Synaptics	Pass

ECP/EPP and printer

Device name	Type	Vendor	Test result
LaserJet 5MP	Laser	HP	Pass
LaserJet 6MP	Laser (ECP)	HP	Pass
Canon BJ-200	Bubble Jet	Canon	Pass

Monitor

Device name	Type	Vendor	Test result
AcerView 56e	UVGA (DDC2B)	Acer	Pass
AcerView 76ie	UVGA (DDC2B)	Acer	Pass

Monitor

Device name	Type	Vendor	Test result
AcerView 98"	UVGA (Green)	Acer	Pass
Compaq V70	DDC2B	Compaq	Pass

USB Device

Device name	Type	Vendor	Test result
Camera (YC76)	Camera	Intel	Pass
M-UA34 USB Mouse	Mouse	Logitech	Pass *
Genius NICHE USB Mouse	Mouse	KYE	Pass *
*Note: * (cursor can't be moved when resume from standby mode)*			
Acer 6511-M	Keyboard	API	Pass
Note: Windows key, application key, system hot key and LED can't work well			

Mini Dock

Device name	Type	Vendor	Test result
Acer Link	100 Base-T	Intel	Pass
Acer Link	Cardbus slot	TI	Pass

PCMCIA Ethernet LAN Adapter

PCMCIA Ethernet LAN adapter

Test item	NW 3.12	NW 4.11	NT 3.51	NT 4.0
Ethernet				
3Com Etherlink III PCMCIA (3C589C)	v	v	v	v
3Com Etherlink III PCMCIA (3C589D)	v	v	v	v
D-Link DE-650CT PCMCIA adapter	v	v	v	v
D-link DE-660 PCMCIA adapter	v	v	v	v
IBM Ethernet credit card adapter II	v	v	v	v
IBM EtherJet PC Card	v	v	v	v
Olicom OC-2220 Ethernet GoCard	v	v	v	v
SMC Elite card PCMCIA (SMC 8016)	v	v	v	v
TDK LAN LAC-CD021	v	v	v	v
TI Ethernet PCMCIA adapter II	v	v	v	v
Xircom CE-10/A corporate series creadit card Ethernet adapter	v	v	v	v
Xircom credit card Ethernet adapter IIPS	v	v	v	v
Xircom credit card Ethernet 10/100 (CE3-10/100)	v	v	v	v
CardBus Card				
3Com fast Etherlink XL (3C575-TX)	v	v	v	v
Xircom CardBus Ethernet 10/100 (Card BUs)	v	v	v	v
TOSHIBA CardBus 100Base-TX (Card Bus)	v	v	v	v
Intel EtherExpress PRO/100 modile adapter 32 Bit (Card Bus)	v	v	v	v
Ethernet+Modem combo Card				
3Com (3C562C/3C563C) EtherLink III +336 modem PC card	v	v	v	v
Eiger labs 28.8 LAN/modem combo card	V	v	v	v
Megahertz CC-XJEM3288 multifunction card	v	v	v	v
Motorola PCMCIA 28.8 modem/fax/LAN adapter	v	v	v	v
Olicom OC-2232 GoCard Ethernet/modem 336	v	v	v	v
Xicom credit card Ethernet + modem 28.8	v	v	v	v
Xicom credit card Ethernet + modem 33.6	v	v	v	v

PCMCIA Ethernet LAN adapter

Test item	NW 3.12	NW 4.11	NT 3.51	NT 4.0
Token-Ring				
3Com TokenLink III 16/4 PC card adapter (3C689)	v	v	v	v
IBM auto 16/4 Credit card adapter	v	v	v	v
Olicom Token-Ring GoCard	V	v	v	v
Token-Ring+Modem combo card				
Olicom OC-2232 GoCard Token-Ring/ modem 336	v	v	v	v

PCMCIA Modem Card

Model name	Pass items
AT&T KeepInTouch card 14.4 datd/14.4 fax	• Driver installed
ActionTec DataLink 56K fax/modem (K56flex)	• Phone Dialer
Apollo FM560 fax/modem (K56flex)	
D-Link DM-336 WinConnect 33.6 fax Modem	• Hyper Terminal
Hayes OPTMA 288 V.34+FAX	• Dial-Up Networking
Hayes OPTIMA 366 V.34+FAX for PCMCIA	
Lasat credit 288 fax/medem	
Megahertz XJ3288R modem	
Megahertz XJ-CC4288 modem	
Motorola XJ-4336 33.6 PC card modem	

PCMCIA Modem Card

Model name	Pass items
Motorola montana 28.8 modem/fax	• Driver installed
Xircom credit card modem 33.6 (CM-33)	• Phone Dialer
TDK CyberExpress 3000 V.34 data/fax modem	• Hyper Terminal
TDK DF2814 V.34 fax/modem	• Dial-Up Networking
USRobotics sportster 28.8 fax/modem	
USR megahertz 56K PC card modem XJ1560	
ZOOM PCMCIA V.34C fax/modem	
3Com Etherlink III PCMCIA (3C562)	
3Com Etherlink III LAN+336 modem (3C562C/ 3C563C)	
Megahertz CC-XJEM3288 multifunction card	
Motorola maniner 28.8 modem/fax/LAN adapter	
Olicom GoCard combo Eth/modem 336	
Olicom GoCard combo TRN/modem 336	
Xicom creadit card etherner+modem II (CEM2)	
Xircom creadit card ethernet+modem 28.8 (PS-CEM-28)	
Xircom credit card ethernet+modem 33.6 (CEM33)	
Olicom OC-2232 GoCard Token-Ring/modem 336	
CIS 56K fax/modem	
USRobotics sportster 28800 fax modem	
ADI 33600 SVD modem	

Microsoft Windows 95 (Japanese OSR2.1J)

Printer Test

Model Name	Vendor	Test result
Laser shot B406GII	Canon	Pass

PCMCIA Adapter Test

Model Name	Vendor	Windows95
Fast-SCSI	IBM	Pass
TDKLan LAK-CD021	TDK	Pass
IBM ethernet card II	IBM	Pass
SFM020W flash memory 20MB	TDK	Pass
VIPER 170E	VIPER	Pass

Microsoft Windows 95 (Chinese OSR2.1)

Print

Model Name	Vendor	Windows95
HPLaserJet5MP	HP	Pass
HPLaserJet6MP	HP	Pass

Monitor

Model Name	Vendor	Windows95
AcerView 56e	Acer	Pass
AcerView 76ie	Acer	Pass
MAG DX15F	MAG	Pass
NEC MultiSync XE15	NEC	Pass

Mouse

Model Name	Vendor	Windows95
PS/2 Mouse	Microsoft	Pass